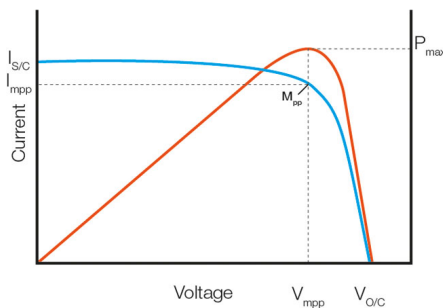




**SEAWARD**  
ELECTRICAL SAFETY TESTING  
& MEASURING.

## What is solar PV I-V curve tracing?

The electrical power produced by a solar PV cell or module is a function of the current (I) and voltage (V) characteristics. Measuring the relationship between current and voltage whilst varying the electrical load connected to the PV cell or module from open circuit to short circuit produces a characteristic current vs voltage (I-V) curve as shown below in figure 1. The points where the curve meets the current and voltage axis are the short circuit current  $I_{s/c}$  and open circuit voltage  $V_{o/c}$  respectively.



Power is the product of voltage and current and so the power vs voltage curve shown in figure 2 can be generated from the measured voltage and current data. The power vs voltage curve shows the point at which the power is a maximum ( $P_{max}$ ). The corresponding maximum power point  $M_{pp}$  is shown on the I-V curve. Loading the PV module such that the current is  $I_{mpp}$  and voltage is  $V_{mpp}$  will operate the PV module at the maximum power point ( $M_{pp}$ ) and result in the maximum power generation.

If you require more help, please contact us at

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